Resighting Individually Marked Birds…

Your resighting work will be part of an international effort to individually mark Red Knot (*Calidris canutus*) in the Western Hemisphere in order to better understand their ecology, population status, and trends. Ruddy Turnstone (*Arenaria interpres*), Sanderling (*Calidris alba*), and Semipalmated Sandpipers (*Calidris pusilla*) have also been marked. Approximately 10% of the red knot population in the Western Atlantic flyway has been individually marked at this point. The birds are marked with colored flags and bands.
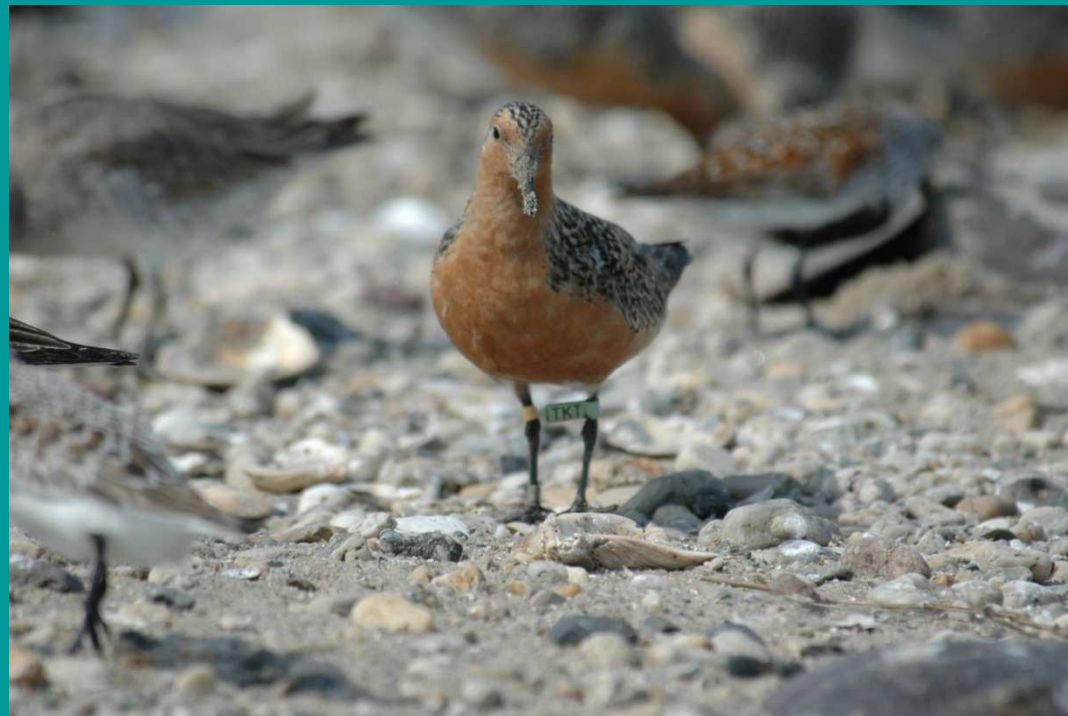
Birds have been marked for resighting in three different ways:

- ❖ Flags with 2 characters plus color band
- ❖ Flags with 3 characters (may have additional color bands)
- ❖ Flags with no characters plus colored bands

** You are only expected to record birds with characters on the flag.

2 characters

3 characters

No characters

Birds without characters on the Flag

Birds were primarily marked in this way as cohorts prior to 2003. A cohort means a group of birds were marked the same way. The addition of color bands made some of these birds identifiable as individuals.

Over the years some birds have lost one or more bands, which can make it uncertain whether it is cohort or individually marked. In addition there is difficulty in determining color due to fading and staining of the plastic. Finally, due to the number of bands that need to be accurately recorded there has been difficulty getting reliable observations. *For these reasons you will not be expected to record birds marked in this way*.

Birds with characters on the flag

Birds marked with flags that have characters are all marked as individuals.   With one exception, all can be identified as individuals by the flag code alone.

That exception is US (lime colored) Flags that have only 2 characters (see second photo from left). In this case, duplicate codes were used and the color band (usually there is only one and it is on the opposite leg) must be recorded as well as the flag code.

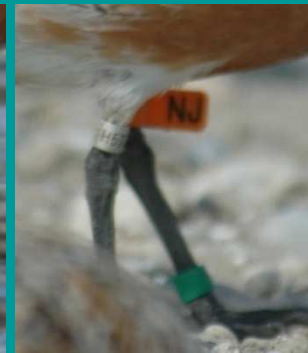This bird needs to have the Flag Code AND Band Color recorded

US   US   Chile   Argentina   Argentina   Brazil

Flag Colors by Country

Each country has been assigned a specific color flag to use. The flag colors you will most likely see are:

Flag colors and inscriptions:

	Pre-2003	2003	2004	2007
Canada		AB		
USA		AB	ABC	1AC
Brazil		AB		
Argentina		AB		
Chile		AB		

The convention for recording flags is to write an "F" to designate it is a flag and the first letter of the color for example: Brazil would be FB

Examples of flags and colored bands with discoloration :

Here are some examples of the plastic material that has faded or , become stained/obscured. This can make the characters on the flags difficult or impossible to read. In addition, different lighting conditions can make the colors difficult to determine. Taking your time to be certain of the observations and noting these conditions can be helpful in difficult cases.
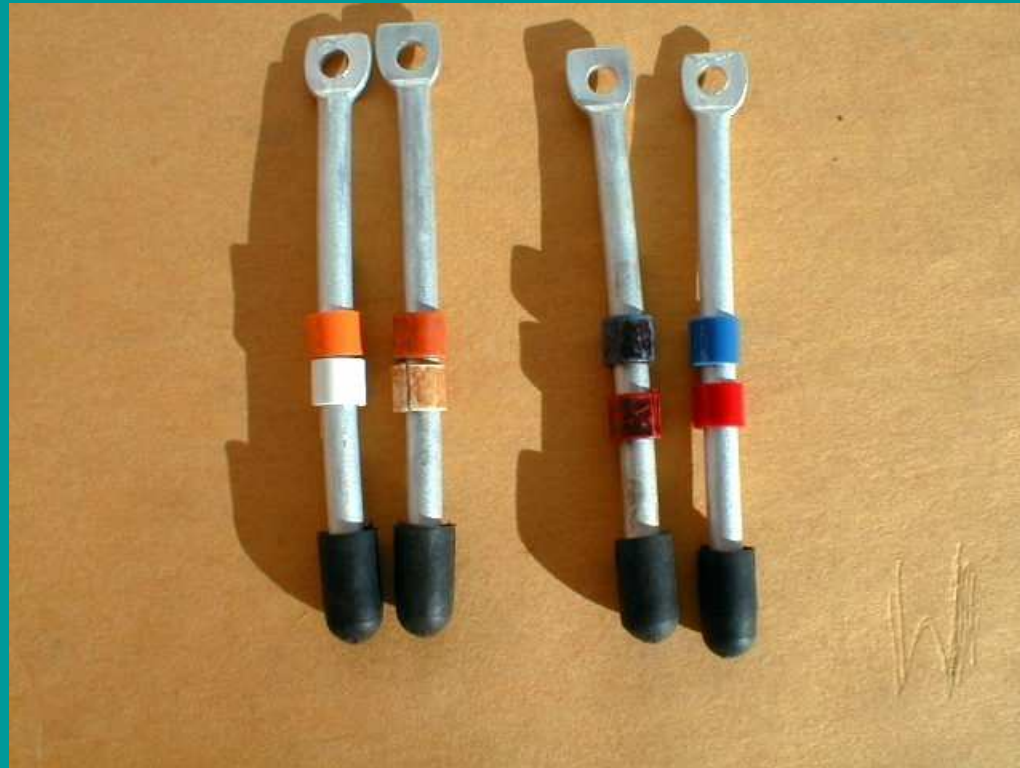
Overview

This training module is designed to teach you how to resight and record the information you collect. You will be part of a team of 2 or more people who will be assigned to go to a specific location and record what you see for a period of time. Your team will record where, when, who was on the team, what the conditions were, and estimate the number of birds by species in that location. A Site Visit Form is used to record this information.

In addition, you will "resight" any individually marked birds you see. A Scan Form will be used to record this information. Accuracy is critical, otherwise the resighting data cannot be used.

You will be outside most of the time doing this. It is a good idea to dress for changing conditions, have water and snacks, as well as sunscreen and insect repellent.

Site Visit Form & Scan Form

Site Visit Form

Scan Form

Site Visit Form

The Site Visit Form begins with general information that includes: Scan Sheets, Observers, Date and Time, Location, Tides, Weather, and Visibility.

Check if no flags Obs ___	# REKN Sheets _/_	# RUTU Sheets____	# SAND Sheets____	# SESA Sheets____	*FOR OFFICE USE* Sheet ID: 2009 _ _____

Delaware Shorebird Project

Visit summary form (aka Cover Sheet)

DO NOT use this sheet for Mispillion surveys

Delaware Shorebird Project

Visit details *(fill out on every visit even if no shorebirds present)*

Observer(s): K Kalasz J Woods	Date: 12 May 2009	Site: North Bowers Beach
	Time: - 24 Hour (00:00)	
Scribe: G Breese	Start: 0930	
Record names as first initial & last name	End: 1315	

Time of tide (approx.) CIRCLE ONE

1 = HIGH, 2 = near high/RISING, 3 = near high/FALLING, 4 = half/RISING, 5 = half/FALLING, 6 = low/RISING, 7 = near low/FALLING, 8 = LOW, 9 = UNKNOWN

Weather Conditions

Sky: 20 (% overcast)	Wind: (Beaufort Scale) 0 1 2 3 4 5 6 (circle one)	Wind Direction: Onshore Offshore Alongshore	Visibility: Low Mod High	Rain: None Light

BEAUFORT WIND SCALE: 0 - Calm; 2 - Light Air (smoke drifts); 3 - Gentle breeze (can feel wind on your face); 4 - Moderate breeze (raises dust & paper); 5 - Fresh breeze (trees sway); 6 - Strong breeze (large tree branches move, wires whistle)

Moderate Heavy

Site Visit Form: Observers, etc

Visit details *(fill out on every visit even if no shorebirds present)*

Observer(s): *K Kalasz* *J Woods*	Date: *12 May 2009*	Site:
	Time: - 24 Hour (00:00)	*North Bowers Beach*
Scribe: *G Breese*	Start: *0930*	
Record names as first initial & last name	End: *1315*	

This section is used to record the observers, who recorded the information on the sheet, the date and time of the visit, and the location visited. Make sure to:

- Use first initial and complete last names to avoid confusion

- Write the month as a word to avoid confusion

- Use 24 hour time

- Be consistent with location names

12 Hour Time vs 24 Hour Time

morning

8:00 am	=	08:00
10:15 am	=	10:15

noon →

12:00 pm	=	12:00

afternoon

3:20 pm	=	15:20
4:00 pm	=	16:00

evening

6:30 pm	=	18:30
9:57 pm	=	21:57

midnight →

12:00 am	=	00:00
2:00 am	=	02:00
4:00 am	=	04:00

Site Visit Form: Bird Info

Bird Numbers (Enter "0" if none present) ACCURACY:Please indicate in each block whether your count is:
TC - a true count, ES - an extrapolated estimate, or GE - a "guesstimate". Place tallied count in smaller boxes.

Knot: 5, 15, 1, 18 39	TC (circled) ES GE	Turnstone:	TC ES GE	Sanderling:	TC ES GE	Dunlin: 200 200	TC ES (circled) GE
Semi-p Sand: 1000 1000	TC ES GE (circled)	S-b Dowitcher: 0	TC ES GE	Other*:	TC ES GE		
Herring Gull: 0	TC ES GE	Ring-billed Gull: 0	TC ES GE	Laughing Gull: 0	TC ES GE	Gr-Black-b Gull: 0	TC ES GE

* all other shorebirds including Least Sandpiper, Willet and Am. Oystercatcher; also Least Tern, Black Skimmer

Flock Activity (feeding, loafing, flying, etc.)

50% Feeding, 50% loafing

Total numbers of birds are recorded on the Site Visit Form. Enter a "0" in the block for species not observed rather than just leaving it blank. This will ensure that the person entering the data knows that species were not present rather than not counted. Indicate whether it is a True Count (TC), Extrapolated Estimate (ES), or a Guesstimate (GE).

True Count: Each bird was counted

Extrapolated Estimate: Numbers were systematically estimated

Guesstimate: A quick estimate was done, basically a first impression

Flock Activity is meant to give a general impression of what the birds were doing.

Site Visit Form: Human Activity & Disturbance

Human activity (include boats, number of people, foot traffic, dogs, *etc.*)

Beach walkers (2)

Disturbance   During this census, shorebirds were: (circle one) *

A = UNDISTURBED, B = disturbed 1-2 times, C = 3-4 times, D = 5-10 times, E > 10 times, X = unknown

*include natural <u>and</u> human-caused disturbance

This section is meant to give a rough idea of the human activity taking place during the visit and how often the birds are disturbed.

Disturbance includes non human disturbance as well as disturbance caused by humans. You are not expected to spend a lot of time on this, simply give a reasonable sense for what was occurring. Pay particular attention to boats and peregrine falcons (PEFA) and include them in disturbance.

Site Visit Form: Sturgeon

Sturgeon Observation

Approximate Length _____   Photo Taken? Yes   No

Condition/Comments:

Occasionally Sturgeon are encountered dead on the beach. Sturgeon are ancient fish, dating back at least 70 million years, and can be found along the entire Atlantic coast from Florida to Labrador, Canada. Sturgeon may live up to 70 years old. Since colonial times, sturgeon have supported commercial fisheries and in the late 1800s, they were second only to lobster among important fisheries with landings estimated at seven million pounds per year. Overharvesting of sturgeon for flesh and eggs (known as caviar) continued through the 1990s. Currently rare, sightings provide valuable information for scientists and managers working to conserve them.

Scan Sheet

FIELD RESIGHTING DATA SHEET
ONLY 1 SPECIES PER SHEET

Sheet _1_ of _1_

| FOR OFFICE USE |
| Sheet ID: 2009_ _____ |

| Species: Rod Knot | Observer: K Kalasz | Date: | Site: |
| | Scribe: GBreese | 12 May 2009 | North Bowers Beach |

Work down the columns. Please write clearly! See additional notes at bottom.

Time			Abdominal Profile:	# of Flag Characters:	Time			Abdominal Profile:	# of Flag Characters:
1030	FL(NAC)	L		3					
	—	M	Plumage:	RUTU Sex (if known):				Plumage:	RUTU Sex (if known):

The primary purpose and what you will spend most of your time on will be recording individually marked birds using the Scan Sheet. Accuracy is critical. The next few slides will describe how birds are marked, what to observe, and how to record the information properly.

Recording Information for Individually Marked Birds:

Information to record:	Species	flag color	3 character code
In this photo:	Red Knot	Orange Flag	CNP

Or to write it more efficiently: REKN FO (CNP)

Species Codes

- Red Knot   =   REKN
- Ruddy Turnstone   =   RUTU
- Sanderling   =   SAND
- Semipalmated Sandpiper   =   SESA

Note: This code (which is widely used for birds) uses the first two letters of the first and last word, or, in the case of the bird having only one word for its common name, the first 4 letters.

Flag/Band Position

The position that a band or flag has on the legs of a bird can be significant. The scheme used is as if you are looking at the bird from the rear:

Upper Left

Upper Right

Lower Left

Lower Right

Information to record for birds with a 2 character Lime Flag:

Information to record:

Species

flag color

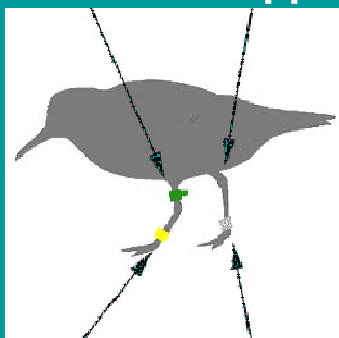2 character code

Colored Band(s)

Position on legs

Upper Left   **Upper Right**

Lower Left   **Lower Right**

In this photo:

REKN   FL (XL) | O

-- | m

Note: Use "—" to indicate that there were no bands at that position on the leg. Use " " to indicate that you do not know if there were any bands at that position on the leg. Use "m" to indicate metal band which you may be able to see.

The Scan Sheets are designed to follow this method of recording. You do not need to fill out all 4 quadrants if the code does not require it. For instance, in the example below you could have simply entered "FL (NAC)" in the upper left quadrant. As recorded this tells you that the red knot had a lime flag on the upper left leg with the characters "NAC" inscribed on the flag, nothing on the lower left leg, a lime band on the upper right leg, and a metal band on the lower right leg.

Sheet _1_ of _1_

FIELD RESIGHTING DATA SHEET
ONLY 1 SPECIES PER SHEET

FOR OFFICE USE	
Sheet ID: 2009_ _____	

Species: Rod Knot	Observer: K Kalasz	Date:	Site:
	Scribe: GBreese	12 May 2009	North Bowers Beach

Work down the columns. Please write clearly! See additional notes at bottom.

Time			Abdominal Profile:	# of Flag Characters:	Time			Abdominal Profile:	# of Flag Characters:
1030	FL (NAC)	L		3					
	—	M	Plumage:	RUTU Sex (if known):				Plumage:	RUTU Sex (if known):

Remember: Lime colored flags with only 2 characters also need to have the colored bands recorded in the appropriate quadrants. Accuracy is critical. Write clearly. Do not put more than one species per sheet. Indicate how many sheets per species in the upper right corner.

Time should be recorded at the start and then every 30 minutes, on the hour and half hour. Try not to duplicate birds within one time period. Do record the same bird in different time periods. This provides information on turnover rates.

FIELD RESIGHTING DATA SHEET
ONLY 1 SPECIES PER SHEET

FOR OFFICE USE
Sheet ID: 2009_ _____

Species: Red Knot	Observer: K Kalasz	Date:	Site:
	Scribe: GBreese	12 May 2009	North Bowers Beach

Work down the columns. Please write clearly! See additional notes at bottom.

Time			Abdominal Profile:	# of Flag Characters:	Time			Abdominal Profile:	# of Flag Characters:
1030	FL (NAC)	L		3					
	—	M	Plumage:	RUTU Sex (if known):				Plumage:	RUTU Sex (if known):

Generally you will not be using the Number, Abdominal Profile, Plumage, or RUTU Sex boxes until you have further training and experience beyond the scope of this module.

Site Visit Form: After You have Finished Resighting

Check if no flags Obs ___	# REKN Sheets___/___	# RUTU Sheets_____	# SAND Sheets_____	# SESA Sheets_____	FOR OFFICE USE Sheet ID: 2009 _ _____

After you have finished resighting, be sure to record how many Scanning Sheets were filled out on that visit. This information is entered at the top of the Scan Sheet. This links the Site Visit Form with the Scan Sheets. In other words the marked bird observations are linked to the specific visit. Simply enter the number of Scan Sheets filled out for each species. If no marked birds were observed check the "No Flags Observed" box.

Here are some examples

- Note what is being recorded and how it is written down
- Remember that it is written as if you are seeing the bird from the rear.

Example 1

Example 1

REKN   FL (PLE)

Since this is a 3 character flag this is all the information needed.

Example 2

Example 2

RUTU   FL (HYC)

Note this is a ruddy turnstone. Since this is a 3 character Lime colored flag this is all the information needed.

Example 3

Example 3

REKN   FL (XL) | O

‑‑ | m

Since this is a 2 character flag you need to record where colored bands are. Note that if you cannot see part of the leg, you should leave that quadrant blank (" ") as opposed to a "—" for no bands or flags on that part of the leg.

You do not need to record everything, but must record any color bands in addition to the flag. It would also be acceptable to record this as:

REKN   FL (XL) | O
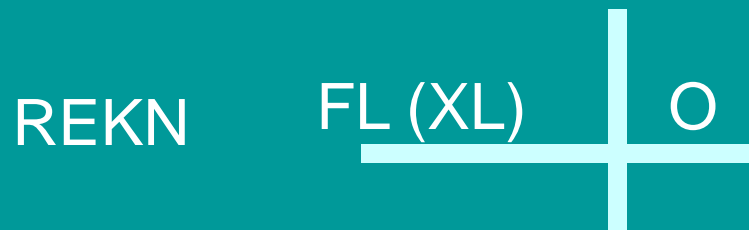
The next 20 slides will give you practice

- Pretend you are in the field
- Decide whether to record the information or not
- Write down the information
- After every 5 slides you will see what should have been recorded.
- Accuracy is more important than speed
- If you cannot make out the characters, note what you saw and were able to observe, along with notes on the staining or other conditions that made it difficult or impossible to determine the code.
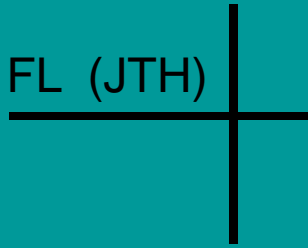
Example 4

Example 4

Example 6

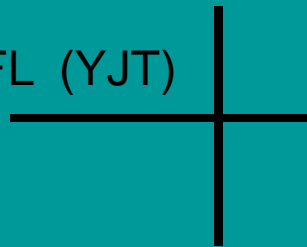# Example 7

Example 8

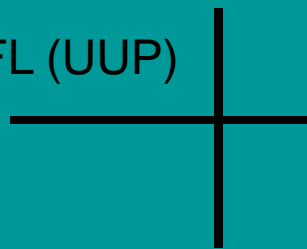Example 4: REKN FL (JTH)
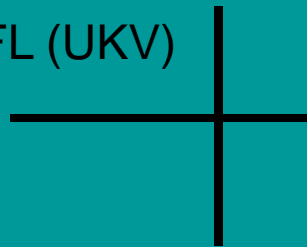
Example 5: nothing to record for this sanderling (SAND)

Example 6: REKN FL (YJT)

Example 7: REKN FL (UUP)

Example 8: REKN FL (UKV)

Example 9

Example 10

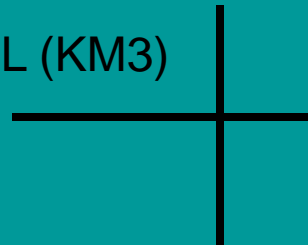# Example 11
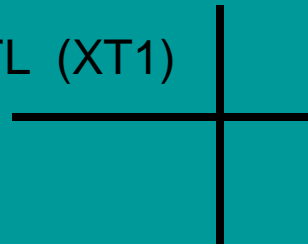
Example 12

Example 13

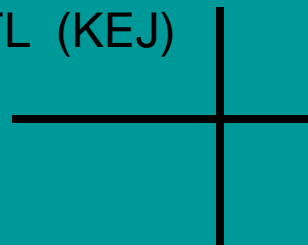Example 9: nothing to record (REKN)

Example 10: nothing to record (SESA)

Example 11: REKN FL (KM3)

Example 12: REKN FL (XT1)

Example 13: REKN FL (KEJ)

Example 14

Example 15

Example 16

Example 17

Example 18

14: REKN   FO (NJ) | m   or   FO (NJ)

G | --   G

15: REKN FO (NJ) | m   or   FO (NJ)

G   G

16: nothing to record on this REKN

17: REKN Flag obscured   FL (2_) | G

m

Recording unreadable characters can be helpful. In this case the order and number of "_"s in the code is important. One "_" per character and in the proper location for the code. In this case, you are saying it was a 2 character code and the second letter was obscured.

18: REKN FL (UTM)

Example 19

Example 20

Example 21

Example 22

Example 23

19: REKN FO (CNP)

20: REKN FL (HM7)

21: REKN   FL (N7K)

22: REKN FL (_2)

flag obscured, legs not seen. In this case you are saying you saw a 2 character code, and the first character was obscured, and you did not get a chance to see the legs.

23: RUTU FL (AJK)

Example 24

Example 25

Example 26

Example 27

Example 28

Example 29

24: REKN FL (EHC)

25: REKN FO (LUJ)

26: REKN FB (AB)

Y

27: REKN FR (SM)

--

28: RUTU FL (LNA)

29: REKN FL (M9T)

Tagged Horseshoe Crabs

If you find a tagged Horseshoe Crab Record that too.

These tags will have a unique tag number and a phone number for calling in the information:

Note: Two different phone numbers are being used. In addition to the tag number, you should record the telephone number, date, location, whether the animal was alive or dead, and whether you left the tag on or took it off, which you might do if the animal was dead.

Credits

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